

APPENDIX

AMENDED CLAIMS SHOWING AMENDMENTS

1. (amended) A programmable logic device comprising:

- a plurality of logic resources;
- a plurality of groups of interconnection
- 5 conductors for interconnecting said logic resources; and
- a plurality of programmable interconnection resources for connecting conductors in said groups of interconnection conductors to one another and to said plurality of logic resources, said programmable
- 10 interconnection resources being less than fully populated; said programmable logic device further comprising:
 - at least one random access memory having a read port and a write port;
 - a first programmable interconnection resource
 - 15 in said plurality of programmable interconnection resources for connecting port conductors in said read port to a selected one of said plurality of groups of interconnection conductors; and
 - a second programmable interconnection
 - 20 resource in said plurality of programmable interconnection resources for connecting port conductors in said write port to said selected one of said plurality of groups of interconnection conductors; wherein:
 - said read port has a first number of read
 - 25 port conductors;
 - said write port has a second number of write
 - port conductors;
 - said first number is equal to said second
 - number, each read port conductor in said read port having a
 - 30 corresponding write port conductor in said write port; and
 - said first and second programmable interconnection resources are populated to allow connection of [an] each individual conductor in said selected one of said plurality of groups of interconnection conductors to

35 [corresponding] an individual read port [conductors]
conductor in [both] said read port and to an individual
write port conductor, corresponding to said individual read
port conductor, in said write port.

3. (amended) A digital processing system
comprising:

processing circuitry;
a system memory coupled to said processing
5 circuitry; and

[a programmable logic device as defined in
claim 1] coupled to the processing circuitry and the system
memory, a programmable logic device comprising:

a plurality of logic resources,
10 a plurality of groups of interconnection
conductors for interconnecting said logic resources, and
a plurality of programmable interconnection
resources for connecting conductors in said groups of
interconnection conductors to one another and to said
15 plurality of logic resources, said programmable
interconnection resources being less than fully populated,
said programmable logic device further comprising:

at least one random access memory having a
read port and a write port,
20 a first programmable interconnection resource
in said plurality of programmable interconnection resources
for connecting port conductors in said read port to a
selected one of said plurality of groups of interconnection
conductors, and

25 a second programmable interconnection
resource in said plurality of programmable interconnection
resources for connecting port conductors in said write port
to said selected one of said plurality of groups of
interconnection conductors, wherein:

30 said read port has a first number of read
port conductors;

said write port has a second number of write port conductors;

35 said first number is equal to said second number, each read port conductor in said read port having a corresponding write port conductor in said write port; and
said first and second programmable interconnection resources are populated to allow connection of each individual conductor in said selected one of said
40 plurality of groups of interconnection conductors to an individual read port conductor in said read port and to an individual write port conductor, corresponding to said individual read port conductor, in said write port.

4. (amended) A printed circuit board on which is mounted a programmable logic device [as defined in claim 1],
said programmable logic device comprising:

a plurality of logic resources;
5 a plurality of groups of interconnection conductors for interconnecting said logic resources; and
a plurality of programmable interconnection resources for connecting conductors in said groups of interconnection conductors to one another and to said
10 plurality of logic resources, said programmable interconnection resources being less than fully populated;
said programmable logic device further comprising:
at least one random access memory having a read port and a write port;
15 a first programmable interconnection resource in said plurality of programmable interconnection resources for connecting port conductors in said read port to a selected one of said plurality of groups of interconnection conductors; and
20 a second programmable interconnection resource in said plurality of programmable interconnection resources for connecting port conductors in said write port to said selected one of said plurality of groups of interconnection conductors; wherein:

25 said read port has a first number of read
port conductors;
 said write port has a second number of write
port conductors;
 said first number is equal to said second
30 number, each read port conductor in said read port having a
corresponding write port conductor in said write port; and
 said first and second programmable
interconnection resources are populated to allow connection
of each individual conductor in said selected one of said
35 plurality of groups of interconnection conductors to an
individual read port conductor in said read port and to an
individual write port conductor, corresponding to said
individual read port conductor, in said write port.

7. (amended) An integrated circuit comprising:
 a plurality of semiconductor devices;
 a plurality of groups of interconnection
conductors for interconnecting said semiconductor devices;
5 and

 a plurality of programmable interconnection
resources for connecting conductors in said groups of
interconnection conductors to one another and to said
plurality of semiconductor devices, said programmable
10 interconnection resources being less than fully populated;
said integrated circuit further comprising:
 at least one random access memory having a
read port and a write port;
 a first programmable interconnection resource
15 in said plurality of programmable interconnection resources
for connecting port conductors in said read port to
conductors in a selected one of said plurality of groups of
interconnection conductors; and
 a second programmable interconnection
20 resource in said plurality of programmable interconnection
resources for connecting port conductors in said write port

to conductors in said selected one of said plurality of groups of interconnection conductors; wherein:

25 said read port has a first number of read
port conductors;
 said write port has a second number of write
port conductors;
 said first number is equal to said second
number, each read port conductor in said read port having a
30 corresponding write port conductor in said write port; and
 said first and second programmable
interconnection resources are populated to allow connection
of [an] each individual conductor in said selected one of
said plurality of groups of interconnection conductors to
35 [corresponding] an individual read port [conductors]
conductor in [both] said read port and to an individual
write port conductor, corresponding to said individual read
port conductor, in said write port.

9. (amended) A digital processing system comprising:

 processing circuitry;
 a system memory coupled to said processing
5 circuitry; and
 [an integrated circuit as defined in claim 7]
coupled to the processing circuitry and the system memory,
an integrated circuit comprising:
 a plurality of semiconductor devices,
10 a plurality of groups of interconnection
conductors for interconnecting said semiconductor devices,
and
 a plurality of programmable interconnection
resources for connecting conductors in said groups of
15 interconnection conductors to one another and to said
plurality of semiconductor devices, said programmable
interconnection resources being less than fully populated,
said integrated circuit further comprising:

at least one random access memory having a
20 read port and a write port,
a first programmable interconnection resource
in said plurality of programmable interconnection resources
for connecting port conductors in said read port to
conductors in a selected one of said plurality of groups of
25 interconnection conductors, and
a second programmable interconnection
resource in said plurality of programmable interconnection
resources for connecting port conductors in said write port
to conductors in said selected one of said plurality of
30 groups of interconnection conductors, wherein:
said read port has a first number of read
port conductors;
said write port has a second number of write
port conductors;
35 said first number is equal to said second
number, each read port conductor in said read port having a
corresponding write port conductor in said write port; and
said first and second programmable
interconnection resources are populated to allow connection
40 of each individual conductor in said selected one of said
plurality of groups of interconnection conductors to an
individual read port conductor in said read port and to an
individual write port conductor, corresponding to said
individual read port conductor, in said write port.

10. (amended) A printed circuit board on which is
mounted [a programmable logic device as defined in claim 7]
an integrated circuit, said integrated circuit comprising:
a plurality of semiconductor devices;
5 a plurality of groups of interconnection
conductors for interconnecting said semiconductor devices;
and
a plurality of programmable interconnection
resources for connecting conductors in said groups of
10 interconnection conductors to one another and to said

plurality of semiconductor devices, said programmable interconnection resources being less than fully populated; said integrated circuit further comprising:

- 15 at least one random access memory having a read port and a write port;
- a first programmable interconnection resource in said plurality of programmable interconnection resources for connecting port conductors in said read port to
- 20 conductors in a selected one of said plurality of groups of interconnection conductors; and
- a second programmable interconnection resource in said plurality of programmable interconnection resources for connecting port conductors in said write port to
- 25 conductors in said selected one of said plurality of groups of interconnection conductors; wherein:
- said read port has a first number of read port conductors;
- said write port has a second number of write port conductors;
- 30 said first number is equal to said second number, each read port conductor in said read port having a corresponding write port conductor in said write port; and
- said first and second programmable interconnection resources are populated to allow connection
- 35 of each individual conductor in said selected one of said plurality of groups of interconnection conductors to an individual read port conductor in said read port and to an individual write port conductor, corresponding to said individual read port conductor, in said write port.